Sept. 13, 1927. 1,642,472

P. G. WENTWORTH

TWISTER TRAVELER AND METHOD OF MAKING SAME

Filed Aug. 26, 1926

Fig. 1

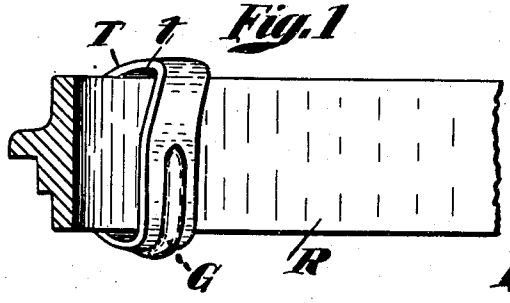


Fig. 2

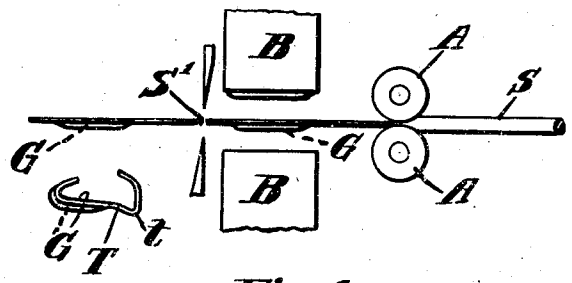


Fig. 3

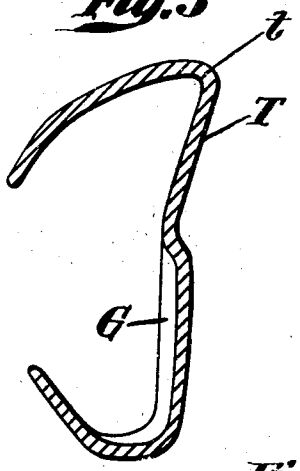


Fig. 4

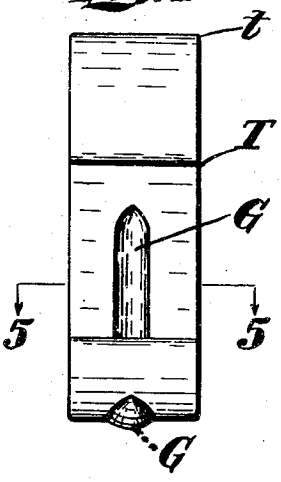
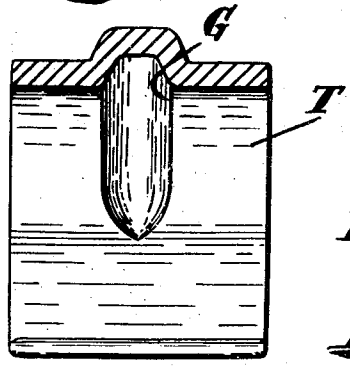


Fig. 5



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UNITED STATES PATENT OFFICE.

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TWISTER TRAVELER AND METHOD OF MAKING SAME.

Application filed August 26, 1926. Serial No. 131,667.

In previous patents I have dealt with the problems of lubrication and durability in travelers and refer to Nos. 1,415,072 and 1,461,059 as examples of each.

My present invention involves both factors and specifically involves certain improvements over the former in which a lubricating channel was formed to catch and deliver the grease.

As therein shown, the groove was a channel cut in the inner face of the traveler which was of the twister type. While these travelers have proved to be highly satisfactory in operation, they were somewhat difficult and expensive to make. Furthermore, they had a tendency common to travelers of the twister type to break at their upper bend, which is usually a rather abrupt turn. The difficulty has been to provide metal pliant enough to take this bend and yet of sufficient rigidity to stand the strains of usage.

Pursuant to my present invention, I provide a traveler of stock capable of being bent as desired, without fracture and yet when formed according to my method, having a very considerable strength or stiffness.

I will proceed to describe my invention and will refer to the accompanying drawings in which I have shown a characteristic embodiment.

In the drawings:

Fig. 1 is a view of such a traveler on its ring.

Fig. 2 is a diagrammatic view of the method of manufacture.

Fig. 3 a vertical section.

Fig. 4 an inside face view, and

Fig. 5 a section on the line 5—5 of Fig. 4.

In the embodiment shown in the drawings, the traveler T is of the usual type and adapted to run on the conventional ring R as shown in Fig. 1. While traveler T is of general form as shown, it has a lubricating groove after the manner of my invention in my previous Patent 1,415,072 as before explained. According to my present invention, the groove G instead of being a slot or cut-groove is in the nature of the blank with its hollow side inward to afford a groove, and its raised side outward forming a longitudinal rim which strengthens the traveler.

The problem in this type of traveler is somewhat similar to that involved in my prior Patent 1,461,059. The twister traveler, however, is a heavier traveler and is formed of different stock which is usually an alloy comprising generally a composition compounded to a certain analysis from brass, copper, zinc, and tin.

The critical point in this type of traveler is at the bend *t* where the stock is turned at substantially right angles to itself, and where the strain, incident to placing the traveler on the ring R, localizes in such a way as to be apt to cause breakage at this point. For this reason, the alloy of this traveler has had to be somewhat soft even though this softness was undesirable in the body of the traveler. In accordance with my invention, I take my stock preferably in rod form as indicated at S in Fig. 2. This stock is passed through rolls A which flatten it to the desired cross section. A stop is then made by the dies B to produce the rib G at suitable intervals. The stock is then severed in proper length as indicated at S′ in Fig. 2, and is then formed into the traveler T as therein indicated.

This provides a traveler which has a surface hardness imparted by the rolling and yet of sufficient softness to permit the bend at *t* and to allow the traveler to harden at that point without breakage. The body of the traveler is, however, given great rigidity by means of the impressed groove or channel G. In the formation of this channel, there is not only the rigidity due to the stiffening effect of the rib as such, but also a further hardening effect due to the work of the metal in the die. The groove G has the same formation as the groove or slot in my previous patent but the traveler so constructed and formed has the additional advantages above recited.

Travelers in accordance with my invention may be of any shape or design and formed of any usual material and may be made in any suitable steps. The method diagrammatically illustrated in Fig. 2 is intended merely as an illustration, and the

depth, length, and location of the groove and rib, may be modified to meet any requirements or conditions.

All such modifications and variants are, therefore, to be understood as contemplated by my invention which is formulated in the following claims.

I claim:

1. A traveler of the class described comprising a flat metal body having a channel bead formed longitudinally thereof, and disposed with its channel side on the inner face of the traveler.

2. A traveler of the class described comprising a flat metal body having a pressed channel bead formed longitudinally thereof, and disposed with its channel side on the inner face of the traveler.

3. In a traveler of the class described, a longitudinal channel bead having its channel on the inner face thereof.

4. In a traveler of the class described, a pressed longitudinal channel bead having its channel on the inner face thereof.

5. The method of forming travelers, consisting in impressing in the stock a channel bead with its channel on the inside face of the traveler.

6. The method of forming travelers, consisting in flattening a cylindrical stock, in impressing in the stock spaced channel beads and severing the stock between beads and in forming therefrom a traveler with its channel on the inside face.

In testimony whereof I affix my signature.

PHILIP C. WENTWORTH.